

PRACTICAL CONSIDERATIONS IN - COMMERCIALIZING IRRADIATION TECHNOLOGY

George Dietz, Isomedix, Incorporated

1. Is there a proven market for the irradiated product?
 - a. Consumer surveys
 - b. Pilot scale acceptance trials
2. What is the anticipated volume throughput over the next five or more years?
3. What are the irradiation details?
 - a. Product(s) to be processed
 - b. Min/max doses
 - c. Product density
 - d. How is product currently handled?
 - e. Refrigeration required? Details?
4. What type of irradiator would be optimum?
 - a. Pallet or carrier (depends on dose and max/min ratio)
 - b. Automatic or batch (depends on variety of products and their doses)
 - c. E-beam or radioisotope?
5. Location or site
 - a. Will the unit service several customers?
 - b. Where are their locations?
 - c. Where are their distribution centers?
 - d. What are the traffic routes?
 - e. Where are the best road networks?
 - f. Is the community receptive to a radiation facility?
 - g. Who is the licensing authority?
 - h. Any unusual geographical obstacles (e.g., earthquake zone)?
6. What are my capital costs?
 - a. Land
 - b. Equipment
 - c. Warehouse
 - d. E-beam or radioisotope
 - e. MHE
 - f. Pre-op
 - g. Dosimetry, computerization

7. What are my G&A and Cost of Sales?

- a. Staffing, labor**
- b. Fringes**
- c. Taxes**
- d. Depreciation**
- e. Utilities**
- f. Maintenance**
- g. Other**

8. What are the processing economics?

- a. Is the process cost competitive, or can it offer a unique advantage?**
- b. Can we obtain firm processing obligations from our potential customers?**
- c. Is a joint venture a more suitable course?**

CURRENT ACTIVITIES IN FOOD IRRADIATION

1. All service irradiation companies: Irradiation of an estimated 40 million pounds of spices/year.
2. Other Isomedix food irradiation activities:
 - a. Registration of two irradiators with FSIS as poultry irradiators.
 - b. Processing of trial shipments of several fruits including:

Strawberries	Rambutan
Blueberries	Atemoya
*Papaya	Star Fruit
*Lyche	
 - c. Continued testing of irradiated meats with several processors, including larger consumer trials.
 - d. Irradiation of poultry for public consumption.

* From Hawaii